

IN THE CLAIMS:

1. (Original): A repeating radio frequency transmission system comprising:
 - (a) a transmitter capable of being placed in signal communication with an infrared remote control, the transmitter comprising:
 - (1) a detector configured to receive a first infrared control signal from the infrared remote control and generate a first electrical signal according to the first infrared control signal;
 - (2) a buffer coupled with the detector to store at least a portion of the first electrical signal;
 - (3) a first code register for storing a first identification signal;
 - (4) a multiplexor for combining the first electrical signal and the first identification signal into a first augmented electrical signal; and
 - (5) a radio frequency transmitter responsive to the first augmented electrical signal for transmitting a radio signal representative of the first augmented electrical signal; and
 - (b) a receiver capable of being placed in infrared control signal communication with a controlled device, the receiver comprising:
 - (1) a radio frequency receiver configured to receive the transmitted radio signal and for generating a second augmented electrical signal according to the received radio signal;
 - (2) a second code register for storing a second identification signal;
 - (3) a code detector for detecting the presence of the second identification signal within the second augmented electrical signal;

- (4) a second multiplexor in communication with the code detector for removing the second identification signal from the second augmented signal, leaving a second electronic signal;
 - (5) an infrared emitter responsive to the second electronic signal for transmitting a second infrared control signal to the controlled device.
2. (Original): The repeating radio frequency transmission system of Claim 1, wherein the first and second code registers are Dual Inline Package switches.
3. (Original): The repeating radio frequency transmission system of Claim 1, wherein the first and second code registers are Read Only Memory.
4. (Original): The repeating radio frequency transmission system of Claim 1, wherein the first and second code registers are logical latches.
5. (Original): The repeating radio frequency transmission system of Claim 1, wherein the first and second code registers are Programmable Read Only Memory.
6. (Original): The repeating radio frequency transmission system of Claim 5, wherein the identification signal is stored in code registers by actuation of user-controlled switches.
7. (Original): The repeating radio frequency transmission system of Claim 5, wherein the identification signal is stored in code registers through actuation of user-controlled switches on the infrared remote control system.
8. (Original): The repeating radio frequency transmission system of Claim 5, wherein the identification signal is stored code registers by downloading codes from a computer.
9. (Original): The repeating radio frequency transmission system of Claim 1, wherein a plurality first identification signals are stored in the first code register.

10. (Original): The repeating radio frequency transmission system of Claim 9, wherein actuation of user-controlled switches determines which of the plurality of first identification signals stored in the code registers is available to the multiplexor.

11. (Original): The repeating radio frequency transmission system of Claim 10, wherein each of the plurality of identification codes are stored in one of the plurality of receivers.

12. (Original): The repeating radio frequency transmission system of Claim 11, wherein the user controlled switches are labeled to correspond with the devices controlled by each of the one or more receivers.

13. (Original): The repeating radio frequency transmission system of Claim 1, wherein a plurality of the first electrical signals are stored in the register.

14. (Original): The repeating radio frequency transmission system of Claim 13, wherein each or the plurality of first electrical signals is associated with a distinct function of a controlled device.

15. (Original): The repeating radio frequency transmission system of Claim 14, wherein each transmitter comprises a plurality of user-controlled switches for designating which of the associated first electrical signals is made available to the multiplexor.

16. (Original): The repeating radio frequency transmission system of Claim 15, wherein a plurality of the first electrical signals are stored in association with a plurality of controlled devices.

17. (Original): The repeating radio frequency transmission system of Claim 16, wherein each transmitter comprises a plurality of user-controlled switches for designating one of the plurality of controlled devices.

18. (Original): The repeating radio frequency transmission system of Claim 1, wherein the transmitter is mechanically coupled to the infrared remote control.

19. (Original): A repeating radio frequency transmission system comprising:

(a) a transmitter capable of being placed in signal communication with an infrared remote control, the transmitter comprising:

- (1) a detector configured to receive a first infrared control signal from the infrared remote control and generate a first electrical signal according to the first infrared control signal;
- (2) a buffer coupled with the detector to store at least a portion of the first electrical signal;
- (3) a first code register storing a first identification signal;
- (4) a modulator to convert the first electrical signal to a first radio signal;
- (5) a multiplexor for combining the first radio signal and the first identification signal into an augmented radio signal; and
- (6) a first antenna responsive to the augmented radio signal for transmitting the augmented radio signal; and

(b) one or more receivers capable of being placed in infrared control signal communication with a controlled device, the receiver comprising:

- (1) a second antenna to receive the augmented radio signal;
- (2) a second code register for storing a second identification signal;
- (3) a code detector for detecting the presence of the second identification signal within the augmented radio signal;
- (4) a second multiplexor in communication with the code detector for removing the second identification signal from the augmented radio signal, leaving a second radio signal;

- (5) a demodulator to convert the second radio signal to a second electronic signal; and
- (6) an infrared emitter responsive to the second electronic signal for transmitting a second infrared control signal to the controlled device.

20. (Original): The repeating radio frequency transmission system of Claim 19, wherein the first and second code registers are Dual Inline Package switches.

21. (Original): The repeating radio frequency transmission system of Claim 19, wherein the first and second code registers are Read Only Memory.

22. (Original): The repeating radio frequency transmission system of Claim 19, wherein the first and second code registers are logical latches.

23. (Original): The repeating radio frequency transmission system of Claim 19, wherein the first and second code registers are Programmable Read Only Memory.

24. (Original): The repeating radio frequency transmission system of Claim 23, wherein the identification signal is stored in code registers by actuation of user-controlled switches.

25. (Original): The repeating radio frequency transmission system of Claim 23, wherein the identification signal is stored in code registers through actuation of user-controlled switches on the infrared remote control system.

26. (Original): The repeating radio frequency transmission system of Claim 23, wherein the identification signal is stored code registers by downloading codes from a computer.

27. (Original): The repeating radio frequency transmission system of Claim 19, wherein a plurality first identification signals are stored in the first code register.

28. (Original): The repeating radio frequency transmission system of Claim 27, wherein actuation of user-controlled switches determines which of the plurality of first identification signals stored in the code registers is available to the multiplexor.

29. (Original): The repeating radio frequency transmission system of Claim 28, wherein each of the plurality of identification codes are stored in one of the plurality of receivers.

30. (Original): The repeating radio frequency transmission system of Claim 29, wherein the user controlled switches are labeled to correspond with the devices controlled by each of the one or more receivers.

31. (Original): The repeating radio frequency transmission system of Claim 19, wherein a plurality of the first electrical signals are stored in the register.

32. (Original): The repeating radio frequency transmission system of Claim 31, wherein each or the plurality of first electrical signals is associated with a distinct function of a controlled device.

33. (Original): The repeating radio frequency transmission system of Claim 32, wherein each transmitter comprises a plurality of user-controlled switches for designating which of the associated first electrical signals is made available to the multiplexor.

34. (Currently Amended): The repeating radio frequency transmission system of Claim 3433, wherein a plurality of the first electrical signals are stored in association with a plurality of controlled devices.

35. (Currently Amended): The repeating radio frequency transmission system of Claim 3534, wherein each transmitter comprises a plurality of user-controlled switches for designating one of the plurality of controlled devices.

36. (Original): The repeating radio frequency transmission system of Claim 19, wherein the transmitter is mechanically coupled to the infrared remote control.

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